

**An Analysis of**  
***An Economic Report to the Governor  
of the State of Tennessee  
on the State's Economic Outlook***

**A Report to the State Funding Board**

**prepared by**

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## Introduction

Each year the Center for Business and Economic Research (CBER) at the University of Tennessee publishes *An Economic Report to the Governor*. The report contains forecast values for key economic variables and commentary on the extent to which changes in these variables may affect local, regional, state and national economies. CBER derives its forecast for the United States from the forecast of Wharton Econometric Forecasting Associates (WEFA); the forecast and analysis for Tennessee is derived from the Tennessee Econometric Model (TEM). Data for the forecast presented in *An Economic Report to the Governor* is from November 1995.

The Tennessee State Funding Board is required by statute to comment on the reasonableness of the forecasted growth rate of the state's economy, as measured by Tennessee nominal personal income. The forecasted growth rate is used as a basis for determining the increase in appropriations from state tax revenues for the next fiscal year. The purpose of this paper is to assist the Tennessee State Funding Board in its consideration of CBER's forecast for 1996.<sup>1</sup>

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<sup>1</sup> See **Appendix A** for statutory requirements.



## Forecast Summary: U.S.

**Gross Domestic Product.** CBER expects U.S. Gross Domestic Product (GDP) to increase 2.5% in 1996. In personal consumption expenditures, which account for approximately 2/3 of GDP, CBER forecasts moderate growth (2.2%). CBER expects overall GDP to be boosted by strong growth in private investment (4.4%) and net exports (6.3%). Government purchases will be almost flat (0.5%). CBER notes that it is difficult to determine the psychology of consumer reaction to debt levels and to workforce changes (e.g. job security). On one hand: “. . . there is little evidence that the current debt load on consumers is excessive” (*ERG* 7); on the other: “. . . the increasingly tight debt situation confronting many consumers will limit their contribution to GDP growth in the short term” (*ERG* 7). CBER also notes that “[e]mployment prospects are intimately related to income expectations and hence to consumption decisions” (*ERG* 7). The Funding Board may wish to consider the possible effects of these factors upon personal consumption expenditures.

**Forecast revisions.** According to recent revisions, GDP did not grow at CBER’s forecasted level for 1995. The BEA has revised 1995 fourth quarter GDP downward to 0.9% from a previously reported 1.7%. The National Association of Business Economists (NABE), forecasting in February, predicts that GDP will grow at a 1.9% rate in 1996.<sup>2</sup> The Funding Board might choose to consider whether the recent downward revisions of economic performance in the last quarter of 1995 and downward revisions of forecasts for 1996 are significant.

GDP	1995: Q3	1995: Q4	1995: Year
CBER (Nov)	4.2%	2.3%	3.3%
BEA (Feb 96)	3.6%	0.9%	2.1%

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<sup>2</sup> Reuter’s Ltd., February 26, 1996.

***CBER comparison with other forecasting organizations.*** Table 1 shows the GDP forecasts of twelve economic forecasting organizations. CBER's forecast (2.5%) is lower than the average of this group (2.8%). However, it is still higher than more recent forecasts.

<b>Comparison of U.S.Forecasts</b>					
<b>Gross Domestic Product (87\$)</b>					
<b>Year</b>	<b>1996</b>	<b>1996</b>	<b>1996</b>	<b>1996</b>	<b>1996</b>
<b>Quarter</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Year</b>
UCLA	2.5	2.5	2.3	2.4	2.4
Merrill Lynch	3	2.7	2.9	2.8	2.9
Dupont	3.2	2.8	2.8	2.7	2.9
Georgia State	3.5	2.8	3.2	2.6	3.0
Northern Trust	2.1	2.4	2.3	2.5	2.3
Conference Board	3.6	3.6	4.3	3.8	3.8
Eaton	3.1	3.3	2.3	3.4	3.0
L.H. Meyer	2.8	2.4	2.3	2.6	2.5
Data Resources Inc.	3.0	2.6	2.5	2.7	2.7
Reg. Fin. Assoc.	3.1	2.7	2.3	2.5	2.7
Michigan-RSQE	3.2	2.4	2.3	2.5	2.6
<b>WEFA (CBER)</b>	<b>2.5</b>	<b>2.6</b>	<b>2.1</b>	<b>2.7</b>	<b>2.5</b>
<b>Forecast Average</b>	<b>3.0</b>	<b>2.7</b>	<b>2.6</b>	<b>2.8</b>	<b>2.8</b>
Forecast Range: Low	2.1	2.4	2.3	2.4	2.3
Forecast Range: High	3.6	3.6	4.3	3.8	3.8

**Table 1.** <sup>3</sup>

***Changes in forecasting methodology.*** The Bureau of Economic Analysis (BEA) has recently announced that it will change to a “chain-type annual-weighted” measure of GDP growth. The effect initially will be to lower the historical values of GDP growth for the most recent past years. The method tends to revise downward the growth estimates for periods after the base year and to revise upward the growth estimates for periods prior to the base year. This change in methodology coincides with a change in the base year for the composite index from 1987 to 1992. The Congressional Budget Office notes that forecast errors tend to increase at turning points/periods in economic activity.

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<sup>3</sup> *Economic Times*, November/December 1995, p. 15. All forecasts were made in October 1995. The CBER forecast in *An Economic Report to the Governor* uses data from November 1995.

**Unemployment.** CBER notes that unemployment has remained higher than normal during the current economic expansion, even in the face of high demand for labor in some regions of the country. CBER forecasts an unemployment rate of 5.8% in 1996, higher than the average for the twelve forecasting agencies presented in Table 2. CBER argues that “many out-of-work individuals are averse to incurring the economic and social costs associated with relocation, especially when the new employment opportunity may prove not to be permanent” (ERG 8). The absence of job security coupled with stagnant wage growth may indeed make relocation a risky investment for some members of the workforce. CBER suggests that this situation may lead to a higher “natural” rate of U.S. unemployment. The Funding Board may wish to consider whether this situation will affect labor markets, and therefore economic growth, in Tennessee. In its *Regional Update* the Federal Reserve Bank of Atlanta noted increased economic activity in Tennessee but argued that “[t]he year could have been better if the central part of the state hadn’t struggled with labor shortages, especially in entry-level jobs” (20).

<b>Comparison of U.S.Forecasts Unemployment Rate 1996</b>	
UCLA	6.0
Merrill Lynch	5.8
Dupont	5.6
Georgia State	5.3
Northern Trust	5.9
Conference Board	5.3
Eaton	5.3
L.H. Meyer	5.9
Data Resources Inc.	5.8
Reg. Fin. Assoc.	5.5
Michigan-RSQE	5.6
<b>WEFA (CBER)</b>	<b>5.9</b>
<b>Forecast Average</b>	<b>5.7</b>

**Table 2.**

***Inflation, federal funds and 30 year treasury bonds.*** CBER forecasts an inflation rate of 2.5% for 1996, based on the consumer price index. CBER expects the federal funds rate to average 4.9% and the interest rate on 30 year treasury bonds to average 6.6%.

<b>Comparison of U.S.Forecasts</b>					
<b>30 Year Treasury Bond</b>					
<b>Year</b>	<b>1996</b>	<b>1996</b>	<b>1996</b>	<b>1996</b>	<b>1996</b>
<b>Quarter</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Year</b>
UCLA	7.1	7.0	6.9	6.9	7.0
Merrill Lynch	6.4	6.5	6.7	7.0	6.7
Dupont	7.0	7.0	7.0	7.0	7.0
Georgia State	6.4	6.4	6.5	6.7	6.5
Northern Trust	6.3	6.3	6.4	6.5	6.4
Conference Board	7.3	7.1	7.4	7.3	7.3
Eaton	6.7	6.9	6.8	7.0	6.9
L.H. Meyer	6.5	6.4	6.4	6.4	6.4
Data Resources Inc.	6.4	6.3	6.4	6.4	6.4
Reg. Fin. Assoc.	7.1	7.3	7.0	6.7	7.0
Michigan-RSQE	6.6	6.5	6.5	6.5	6.5
<b>WEFA (CBER)</b>	<b>6.7</b>	<b>6.6</b>	<b>6.6</b>	<b>6.5</b>	<b>6.6</b>
<b>Forecast Average</b>	<b>6.7</b>	<b>6.7</b>	<b>6.7</b>	<b>6.7</b>	<b>6.7</b>
Forecast Range: Low	6.3	6.3	6.4	6.4	6.4
Forecast Range: High	7.3	7.3	7.4	7.3	7.3

**Table 3.** <sup>4</sup>

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<sup>4</sup> *Economic Times*, November/December 1995, p. 15. All forecasts were made in October 1995. The CBER forecast in *An Economic Report to the Governor* uses data from November 1995.

## Forecast Summary: Tennessee

**Nominal Personal Income.** CBER expects nominal personal income in Tennessee to increase 5.8% in 1996, though the gains are not evenly distributed across categories. Increases are not, for the most part, in wages: “Most of the gain will accrue from sources of income other than wages and salary, such as dividend and proprietor’s income, rents, and interest” (*ERG* xiv). The Funding Board might choose to consider whether the same correlation exists between taxable sales and other components of personal income as exists between taxable sales and wages and salaries. CBER forecasts taxable sales for 1995 to grow 8.2%, with much of the increase due to business purchases. However, CBER notes that these types of purchases are “less directly related to state-level personal income growth,” and that taxable sales will “more closely mirror income growth” in 1996 (*ERG* 43). CBER forecasts an increase in total taxable sales of 6.0% in 1996, slightly more than the increase in nominal personal income.

Tennessee Nominal Personal Income 1996	
Wages and Salaries	5.0%
Other Labor Income	5.3%
Proprietors Income	7.4%
Rent, Interest, Dividends	7.2%
Transfer Payments	6.7%
Total	5.8%

**Other measures of personal income.** CBER also forecasts growth estimates for other measures of personal income. Inflation-adjusted per-

Other Measures of Personal Income: 1996	
Nominal personal income	5.8%
Inflation-adjusted personal income	3.4%
Inflation-adjusted <i>per capita</i> personal income	2.1%
Inflation-adjusted average annual wages <i>per worker</i>	0.4%

sonal income is expected to increase 3.4% in 1996. CBER expects infla-

tion-adjusted average annual wages *per worker* to decrease 0.2% in 1995 and to increase 0.4% in 1996. Inflation-adjusted *per capita* personal income is expected to increase 2.1% in 1996. CBER suggests that inflation adjusted per capita personal income is a “better measure of individual income gains” than nominal personal income (*ERG* 42).



**Forecast error.** CBER has been consistent in recent years in producing conservative forecast estimates of nominal personal income growth. With the exception of 1992, however, the error has been less than ½ a percentage point.

Tennessee Nominal Personal Income				
Year	Actual	Forecast	Error	Abs Error
1990	6.3	5.8	-0.5	0.5
1991	5.0	4.9	-0.1	0.1
1992	8.7	5.0	-3.7	3.7
1993	5.9	5.8	-0.2	0.2
1994	7.0	6.7	-0.4	0.4
Mean Error			-1.0	

**Table 4.**

**Unemployment Rate and Job Growth.** CBER forecasts an average unemployment rate of 5.3% in 1996. CBER notes, however, that there are significant regional variations in unemployment rates. Core counties of metropolitan statistical areas (MSAs) tend to have unemployment rates below the state average, while rural counties, for the most part, have unemployment rates above the state average. CBER notes the negative correlation between unemployment and educational attainment: "Those communities with unemployment rates above 10% have a disturbingly large share of the population with inadequate levels of educational attainment" (ERG 30).

CBER expects total nonagricultural employment to increase 2.2% in 1996. A decrease in manufacturing employment of 0.2% is expected to be offset by increases in trade (2.8%) and services (5.5%) employment, a trend that may explain the expected small growth in wages. CBER predicts that nonagricultural employment will grow at a compound rate of 2.6% through 2004, approximately 72,400 jobs per year. In their discussion of welfare reform, CBER notes: "Fortunately, many of the new jobs to be created over the next few years require little formal education and training. . ." (ERG 122). The Funding Board may wish to consider whether this type of job growth is a significant budgetary factor.

**Gross State Product (GSP).** CBER's outlook for Tennessee is brighter than the outlook for the U.S. as a whole. CBER forecasts GSP growth of 3.7% for 1996 (87\$). The forecast for the U.S. is 2.5%. The manufacturing sector has traditionally been the bellwether of Tennessee's economy. CBER expects growth in GSP to translate into taxable sales growth of 3.6% (87\$). However, CBER has a cautionary note: "The inventory accumulation of manufactured products taking place nationally, weaknesses in automobile sales and continued erosion of the textile and apparel sectors all have negative implications for the state's pivotal manufacturing sector" (ERG 22).

**Changing Governmental Responsibilities.** There are indications that the direct responsibilities of governing, including both administration and policy formulation, may be converging on the state level. It is possible that in the near future the federal government will begin to divest itself, via block grants, of significant administrative responsibilities for major social programs. CBER notes the effects of this administrative shift in regard to the welfare program: “While states are likely to benefit from the increased flexibility associated with block grants, these benefits must be weighed against the losses states will face in the form of reduced federal funds” (*ERG* 86).<sup>5</sup>

In addition to the administrative shift from the federal level down to the state level, state government may find it necessary to provide administrative assistance to local governments. CBER notes in several places the inability of many, primarily rural, local governments to maintain average levels of participation in the state’s economy. For example:

- a) Only nine Tennessee counties are above the state average for per capita personal income (*ERG* 32).
- b) The economic development associated with the automobile industry is restricted for the most part to the mid-state region (*ERG* 27).
- c) In a study of Aid to Families of Dependent Children (AFDC) CBER notes: “The improved Tennessee economy is one reason for the large decline in the number of recipients [of AFDC]” (*Tennessee Case Characteristics Study* xiii). However, a majority of rural AFDC recipients cite the lack of availability of jobs as the primary reason for their continued enrollment in the program.
- d) Rural counties for the most part have unemployment rates that are higher than the state average.
- e) There are few revenue options for rural counties: “For many communities, the problem of financing local activities has much

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<sup>5</sup> The National Conference of State Legislatures reports that some states in our region have established study committees to consider possible federal funding changes. Alabama will conduct hearings on welfare and Medicaid reform; the Florida Senate has created the Select Committee on Social Services Reform; the executive branch in Georgia is studying welfare and Medicaid reform options; North Carolina has established an interim study committee on welfare reform. Other states in the region (Kentucky, Mississippi, South Carolina) have chosen to wait for specific changes at the federal level before acting.

more to do with the *ability* to raise revenues than with the *effort* expended to generate tax revenues” (ERG 36).

- f) The lack of rural retail centers hampers revenue growth: “The lack of retail sales . . . compromises the ability of many local governments to adequately fund public services through their local sales tax” (ERG 36).

The Funding Board may wish to consider whether these are significant budgetary factors.

## Conclusion

Given the strong 4.4% growth of the Tennessee economy in 1995 (87\$), CBER’s forecast of 3.6% GSP growth for 1996 appears reasonable. The Funding Board might choose to consider recent downward revisions of fourth quarter 1995 growth, as well as recent downward revisions of some forecasts for 1996.

CBER’s forecast of 5.8% growth in Tennessee nominal personal income for 1996 also appears reasonable given the 5.9% growth in personal income for 1995. CBER notes, however, that this growth is not for the most part in wages and salaries. The Funding Board might choose to consider whether the distribution of this growth over the categories of personal income will affect state revenues.

## **APPENDICES**

### **Appendix A Statutory Requirements**

#### **TCA §9-6-201**

(a) The estimated rate of growth of the state's economy shall be based upon the projected change in Tennessee personal income.

(b) Tennessee personal income shall consist of those sources of income included in the United State department of commerce's definition of "personal income."

#### **TCA §9-6-202**

(a) At least once each year, and whenever requested to do so by the commissioner of finance and administration or by the joint request of the chairs of the finance, ways and means committees of the senate and house of representatives, the state funding board shall secure from the Tennessee econometric model a report of the estimated rate of growth of the state's economy. such report shall include the major assumptions and the methodology used in arriving at such estimate.

(b) Upon receiving the report specified in subsection (a), the state funding board shall make comments relating to the reasonableness of the estimate, including any different estimate the board deems necessary. The board shall also enclose a list identifying state tax revenue sources and nontax revenue sources, approved by the attorney general and reporter. The department of finance and administration shall provide to the board revenue estimates for each source.

(c) In the event data from Tennessee econometric model is unavailable, the funding board, after consulting with the finance, ways and means committees of the senate and house of representatives, shall obtain and/or prepare a report of the estimated rate of growth of the state's economy.

(d) The reports specified in subsections (a), (b) and (c) shall be forwarded to the commissioner of finance and administration and to each member of the general assembly, after review and definitive comment by the finance, ways and means committees of the senate and house of representatives.

(e)(1) In November of each year, the state funding board shall conduct public hearings to develop consensus estimates of state revenue for the upcoming fiscal year, as well as any revisions to the current fiscal year estimates, as the board deems appropriate.

(2) The funding board shall request economic forecasts and revenue estimates from representatives of state higher education institution business centers located in each of the grand divisions and such other groups or persons as the funding board deems appropriate.

(3) On December 1, or as soon thereafter as practical, the funding board shall present its state revenue estimates, along with a summary of the economic forecast upon which the estimates are based, to the governor and the chairs of the senate and house finance, ways and means committees. If, in the opinion of the funding board, circumstances warrant a review of state revenue estimates it has previously presented, or upon a request of the chairs, the funding board shall consider information it deems necessary and appropriate and may revise its state revenue estimates if appropriate. Any revision to its revenue estimates and reasons therefore shall be forwarded to the governor and chairs.

### **TCA §9-6-203 (excerpt)**

(c) When in any budget document the percentage increase of recommended appropriations from state tax revenues exceeds the percentage increase of estimated Tennessee personal income as defined in § 9-6-201, for the ensuing fiscal year, the governor shall submit a bill or bills for introduction in both houses of the general assembly which shall contain no other subject matter and shall set forth the dollar and percentage by which the estimated growth of the state's economy is exceeded by the appropriations of state tax revenue in accordance with article II, § 24 of the Constitution of Tennessee.

(d) When the percentage increase of appropriations of state tax revenue by the general assembly exceeds the percentage increase of estimated Tennessee personal income as defined in § 9-6-201, for the ensuing fiscal year, the general assembly shall by law containing no other subject matter, set forth the dollar and the percentage by which the estimated growth of the state's economy is exceeded by the appropriations of state tax revenue in accordance with article II, § 24 of the Constitution of Tennessee.

## Appendix B

### Years in which Appropriations have Exceeded Growth

Fiscal Year 1984-1985	\$396,100,000	14.60 %
Fiscal Year 1985-1986	\$58,000,000	1.79 %
Fiscal Year 1986-1987	\$100,000,000	2.76 %
Fiscal Year 1988-1989	\$101,000,000	2.38 %
Fiscal Year 1989-1990	\$74,000,000	1.59 %
Fiscal Year 1991-1992	\$703,100,000	15.09 %
Fiscal Year 1992-1993	\$450,000,000	8.69 %

## Appendix C

### Personal Income Definition

Personal income is a measure of income received by individuals, unincorporated businesses, and non-profit organizations. While it is an important measure of economic activity, personal income is not limited to the wages and salaries of persons. For purposes of establishing this category, the Bureau of Economic Analysis of the U.S. Department of Commerce defines persons as “. . . individuals, non-profit institutions, private non-insured welfare funds, and private trust funds . . . .”

The components of personal income include:

1. wage and salary disbursements;
2. other labor income, including employer contributions for private insurance and retirement programs;
3. proprietors' income, which consists of net income of sole proprietorships and non-incorporated businesses;
4. rental income, personal interest income, dividends and royalties;
5. transfer payments by businesses and government, corporate gifts to non-profit institutions, and other payments not resulting from current services or production.<sup>6</sup>

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<sup>6</sup> U.S. Department of Commerce, Bureau of Economic Analysis.

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